

Expedition. Mr. Laufer gives a careful analysis of zoomorphic patterns, mainly of the Gold tribe; their decorative art shows distinct traces of Chinese influence, but the designs have been evolved in an original and interesting manner.

THE catalogue of bacteriological and pathological apparatus, just published by Messrs. J. J. Griffin and Sons, contains several new instruments and accessories, and will well repay inspection. Among the apparatus we notice several spirit Bunsen burners, which can be used instead of ordinary Bunsen burners where gas is not available. These are, of course, suitable for any laboratory, and not merely for bacteriological work. Of special interest are a number of new centrifuges for use in the examination of blood, sputum, milk. In water, urine and milk analysis a comparatively low rate of revolution is required, and a hand centrifuge giving up to 2000-3000 revolutions a minute is sufficient. When examining blood or sputum it may be necessary to make upwards of 10,000 revolutions a minute, which rate can be obtained by a water-power centrifuge manufactured by Messrs. Griffin. Another noteworthy addition is a special test-tube possessing characteristics always required for bacteriological work, but rarely found.

THE additions to the Zoological Society's Gardens during the past week include a Javan Mynah (*Gracula javanensis*) from Malacca, presented by Mr. George Smith; an Indian Crow (*Corvus splendens*) from India, presented by Mr. E. A. Williams; a Rose-coloured Pastor (*Pastor roseus*) from India, an Indigo Finch (*Cyanospiza cyanea*), a Nonpareil Finch (*Cyanospiza ciris*) from North America, presented by Mr. L. Ingram Baker; a Raven (*Corvus corax*), European, presented by Mr. G. St. Leger Hopkinson; three Blackish Sternotheres (*Sternotherus nigricans*) from Madagascar, two Prasin Snakes (*Coluber prasina*) from Upper Burma, eleven American Box Tortoises (*Cistudo carolina*) from North America, deposited; an Occipital Blue Pie (*Urocissa occipitalis*) from the Western Himalayas, ten Common Chameleons (*Chamaeleon vulgaris*) from North Africa, purchased; a Brush-tailed Kangaroo (*Petrogale penicillata*), born in the Gardens.

OUR ASTRONOMICAL COLUMN

- ASTRONOMICAL OCCURRENCES IN SEPTEMBER.
- Sept. 1. 8h. Jupiter in conjunction with the moon. Jupiter, $0^{\circ} 51'$ North.
 - 3. 7h. 16m. to 8h. 11m. Moon occults the planet Saturn.
 - 4. 7h. 35m. to 8h. 50m. Moon occults the star ξ^1 Sagittari (mag. 5.0).
 - 5. 7h. 24m. Transit (ingress) of Jupiter's Sat. III.
 - 12. 12h. 35m. to 13h. 43m. Moon occults π Arietis (mag. 5.6).
 - 12. 16h. 27m. to 17h. 40m. Moon occults ρ^3 Arietis (mag. 5.5).
 - 13. 9h. 43m. to 10h. 34m. Moon occults 13 Tauri (mag. 5.4).
 - 14. 8h. 39m. to 9h. 18m. Moon occults D.M. + 20° , 785 (mag. 5.8).
 - 15. Venus. Illuminated portion of disc = 0.493.
 - 15. Mars. " " " " = 0.915.
 - 16. 12h. 8m. Minimum of Algol (β Persei).
 - 17. 6h. Venus at greatest elongation. $46^{\circ} 1'$ West.
 - 18. 14h. 48m. to 15h. 40m. Moon occults 29 Cancr (mag. 5.9).
 - 19. 8h. 57m. Minimum of Algol (β Persei).
 - 23. oh. Sun enters Libra, autumn commences.
 - 27. Saturn. Outer minor axis of outer ring = $17'' 25$.
 - 28. 21h. Jupiter in conjunction with the moon. Jupiter, $0^{\circ} 13'$ North.

RING NEBULA IN LYRA.—It is interesting to find in the *Bulletin de la Société Astronomique de France*, August 1900, an account of the first published work done with the great 50-inch refractor of the Paris Exposition while that exhibition is still in progress. M. Eugène Antoniadi, of the Juvisy Observ-

atory, has been for some time making systematic observations of nebulae with the instrument, and a drawing showing a considerable amount of detail accompanies his paper on the Ring Nebula, the first of the series he has undertaken to study. He mentions that the lens used is the photographic one, the other, specially corrected for the visual rays, not yet being in position. The focal length of this glass is about 186 feet (57 metres).

OCCULTATION OF SATURN.—On Monday evening next, September 3, there will be an occultation of Saturn by the moon, for which the following particulars for Greenwich may be useful:—

| | Sidereal Time. | Mean Time. | Angle from | |
|--------------------|----------------|------------|--------------|---------|
| | | | North point. | Vertex. |
| Disappearance ... | 18 6 ... | 7 16 ... | 128 ... | 126 |
| Reappearance | 19 1 ... | 8 11 ... | 217 ... | 206 |

Providing the weather be favourable, this should be an excellent opportunity for observing the occultation of the planet, as the altitude will be almost at its maximum, meridian passage at Greenwich occurring at 7h. 7m. G.M.T. Moreover, from its being such a bright object, observations may be made with instruments of the lowest optical power.

In the *Bulletin de la Société Astronomique de France* for August 1900, M. M. Honorat gives an illustrated description of his observation of the last occultation of Saturn on June 13. He mentions the conspicuous contrast between the slightly yellowish colour of the moon and the greenish tint of the planet. During the occultation the planet appeared separated from the lunar limb by a narrow shadow about $5''$ of arc in width, probably a contrast effect.

At the reappearance of Saturn at the terminator, he could not perceive any trace of penumbral shadow cast on the planet's disc.

OPPOSITION OF EROS.—Two additional circulars have been issued by the special committee appointed by the Astrographic Conference to direct the observations of Eros during the coming opposition. Special attention is drawn to the work which may be commenced at once, such as micrometric observations with all equatorials of large aperture, for furnishing definite positions for the theory of the planet's movement, and that these should be published as soon as possible, to perfect the ephemerides for the actual parallax work later. An ephemeris is included from the computations of M. Millosevich, and tables showing the limiting times between which the planet will have an altitude greater than 20° at various latitudes, and also a table indicating the proper regions to be included on the photographs on dates extending from September 19 to January 7.

In the *Astronomische Nachrichten* (Bd. 153, No. 3656), Prof. S. J. Brown, of the U.S. Observatory at Washington, calls attention to the many opportunities for simultaneous micrometer observations at widely separated stations, and as many observatories are not equipped with the photographic instruments necessary for the more general programme contemplated, gives data for assisting micrometer observers to co-operate for this type of work alone. The high declination of the planet makes it possible to secure simultaneous observations at all the Eastern stations west of Pulkowa, and at all the American observatories east of Denver. He also gives a table showing the Greenwich Mean Time at which the planet will be simultaneously visible at the observatories of Pulkowa, Königsberg, Vienna, Evanston, Madison, Yerkes and Denver for intervals of ten days from 1900 October 1-1901 January 19. Careful sketches of the comparison stars in the field should be made to facilitate subsequent identification. Owing to the rapid orbital motion of Eros rendering observations for position angle and distance very troublesome, measures should be made in rectangular co-ordinates referred to the true equatorial position of the fixed micrometer wire.

THE INTERNATIONAL PHYSICAL CONGRESS.

THE first International Congress of Physics, which has just finished its sittings, has been a brilliant success. The number of participators exceeded a thousand, and, in spite of the attractions which Paris always offers, in spite of the simultaneous rivalry of the Universal Exhibition itself, sectional and general meetings were closely followed up to the last day by a great number of visitors.